



A.D. 1860, *11th JANUARY.* N^o 73.

S P E C I F I C A T I O N

OF

ARCHIBALD BROWNLIE.

TREATMENT OF SEWERAGE MATTERS.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY:

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1860.



A.D. 1860, 11th JANUARY. N° 73.

Treatment of Sewerage Matters.

(This Invention received Provisional Protection only.)

PROVISIONAL SPECIFICATION left by Archibald Brownlie at the Office of the Commissioners of Patents, with his Petition, on the 11th January 1860.

I, ARCHIBALD BROWNLIE, of Glasgow, in the County of Lanark, North
5 Britain, Merchant, do hereby declare the nature of the said Invention for
“IMPROVEMENTS IN THE TREATMENT OF SEWERAGE MATTERS, AND IN THE APPARATUS
EMPLOYED THEREIN,” to be as follows, that is to say :—

This Invention relates to a simple and effective plan of separating the solid
from the liquid matters of sewerage and other impure or waste waters, as well
10 as to the utilisation of such matters, and the prevention of the pollution of
rivers, canals, and lakes, into which sewerage matters have hitherto been
discharged.

According to one modification under which this Invention may be judiciously
carried out in practice, the main or arterial sewer, or a branch thereof, is fitted
15 up with a series of receiving vessels, having open expanded tops with con-
tracted lower ends. These receivers are so disposed in the sewer, or in con-
nection therewith, that the sewerage matters shall flow over their tops, and in
doing so the solid matters held in suspension are intercepted and gradually
deposited in the receivers. These receivers are placed in a line, so that the
20 solid matter missed by the first one is caught by the second, and what is
missed by the second is caught by the third, and so on throughout the series.
In this way the liquid matter flows clear away, leaving deposits of solid matter

Brownlie's Improvements in the Treatment of Sewerage Matters.

in the receivers. The receivers are so disposed in excavations, that their lower ends are freely accessible by waggons or railways, or otherwise, or by barges or boats, into which the deposited matter can be discharged by opening a small valve or discharging duct fitted in the bottom of each.

According to another modification the sewerage matters are caused to flow 5 through or over layers or masses of ashes, carbonaceous matter, or other substance, so that not only is the solid matter held in suspension deposited in such ashes, but the ammoniacal and other valuable ingredients of the sewerage matters are similarly arrested, so as to be capable of being turned to useful account. It is preferred to form filtering beds of ashes, or other suitable 10 matter, either in a series of intercepting embankments in the sewer, or to arrange such filtering beds so as to cause the sewerage discharged to take a tortuous or ziz-zag course, and thus enable the ashes or filtering matter to take up all or most of the valuable ingredients of the sewerage. When the ashes are thoroughly saturated the mass is removed and used as manure, and fresh 15 filtering matter deposited in their place. These two systems of receivers and filtering beds may be worked either in conjunction or separately.

LONDON :

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty. 1860.